Amendments to the Claims:

The listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

Claims 1-14 (canceled)

Claim 15 (currently amended): A device, adapted to be mounted on a vehicle tire, for obtaining energy from the load-induced tire deflections of at least one tire inner wall while rotating upon a load-bearing surface, the device comprising:

a substrate; ~~and~~

an energy converter, mounted on the substrate, coupled to said deflections and converting said deflections into ~~an~~ pulsed electrical output energy ~~form~~ ; and

capture electronics for capturing said pulsed electrical output energy, wherein said capture electronics maximizes the captured energy by adaptation to at least one characteristic of the pulsed electrical energy.

Claim16 (original): The device according to claim 15 wherein said substrate is mounted between the inner walls of the tire.

Claim17 (original): The device according to claim 15 wherein said substrate is adapted to be mounted on an inner surface of the tire.

Claim 18 (original): The device according to claim 17 wherein said inner surface is the inner tread surface.

Claim 19 (original): The device according to claim 15 wherein said substrate is embedded in a wall of the tire.

Claim 20 (original): The device according to claim 15 further comprising a base plate attached to the substrate for attaching the device to an inner surface of the tire.

Claim 21 (original): The device according to claim 20 further comprising an adhesive patch, adhered to said inner surface and securing said base plate, for attaching the energy converter to said inner surface of the tire.

Claim 22 (original): The device according to claim 20 wherein said base plate is flexible and adapted to be mounted within the tire.

Claim 23 (original): The device according to claim 17 further comprising a fastener for attaching the substrate to said inner surface of the tire.

Claims 24-25 (canceled):

Claim 26 (currently amended): The device according to claim ~~25~~ 15, wherein the energy converter comprises a magnet and a coil that are moved relative to each other by the said coupled deflections.

Claim 27 (currently amended): The device according to claim ~~25~~ 15, wherein the energy converter comprises a piezo-electric material that is deformed by the said coupled deflections.

Claims 28-29 (canceled):

Claim 30 (currently amended): The device according to claim ~~29~~ 15, wherein said capture electronics comprises:

at least one capacitor where the said at least one characteristic is the pulse width of the pulsed electrical energy; and

the adaptation is to select the value of the at least one capacitor based on the pulse width of the pulsed electrical energy.

Claim 31 (currently amended): The device according to claim ~~29~~ 15, wherein said capture electronics comprises:

at least one capacitor where the said at least one characteristic is the voltage captured on the at least one capacitor from the pulsed electrical energy; and

the adaptation is to select the at least one capacitor value based on said voltage.

Claim 32 (original): The device according to claim 15 which further couples to the inner wall motion using at least one push rod attached to the at least one inner wall.

Claim 33 (original): The device according to claim 15 which further couples to the inner wall motion using at least one cable attached to the at least one inner wall.

Claim 34 (original): The device according to claim 15 which further responds to the centrifugal force of the rotating tire.

Claims 35-41(canceled):

Claim 42 (currently amended): In a tire adapted to be mounted on a vehicle wheel, a device for obtaining energy from the tire while said tire is rotating upon a load-bearing surface, the device comprising:

a substrate attached to the tire at a selected radial and circumferential location;

an energy converter mounted on the substrate, the converter being disposed to respond to the load induced deflections of at least one tire inner wall to convert said deflections to ~~an~~ pulsed electrical output energy ~~form~~ ; and

capture electronics for capturing said pulsed electrical output energy, wherein said capture electronics further determines at least one feature of the pulsed electrical energy and adaptively changes its configuration so as to maximize the energy captured.

Claim 43 (original): The device according to claim 42 wherein said energy converter is mounted on an inner surface of the tire.

Claim 44 (original): The device according to claim 42 further comprising a base plate securing said substrate to the tire.

Claim 45 (original): The device according to claim 44 wherein said base plate further has opposed parallel inner and outer surfaces and a periphery, said outer surface engaging an inner surface of the tire.

Claim 46 (original): The device according to claim 45 further comprising:

a patch overlying the inner surface of base plate, said base plate being sandwiched between said patch and said inner surface of the tire, said patch further having a portion extending beyond said periphery of the base plate, said portion of said patch being bonded to said inner surface of the tire.

Claim 47 (original): The device according to claim 46 wherein said patch includes an aperture through which the substrate projects.

Claim 48 (original): The device according to claim 44 wherein said base plate is flexible and mounted within the tire.

Claim 49 (original): The device according to claim 44 wherein said substrate is detachably secured to said base plate.

Claim 50 (original): The device according to claim 42 wherein said substrate is attached to the tire by at least one fastener.

Claim 51 (original): The device according to claim 50 wherein said at least one fastener includes a post anchored in a surface of the tire.

Claim 52 (original): The device according to claim 51 wherein said at least one fastener is detachably secured to the post.

Claims 53-54 (canceled):

Claim 55 (currently amended): The device according to claim ~~54~~ 42, wherein said energy converter comprises a magnet and a coil that are moved relative to each other by the said coupled deflections.

Claim 57 (currently amended): The device according to claim ~~54~~ 42, wherein said energy converter comprises a piezo-electric material that is deformed by the said coupled deflections.

Claims 58-59 (canceled):

Claim 60 (currently amended): The device according to claim ~~59~~ 42, further comprising at least one capacitor for capturing the said pulsed electrical energy and wherein the said at least one feature is the electrical energy pulse width and said configuration is adapted by selecting the capacitor value based on said pulse width.

Claim 61 (currently amended): The device according to claim ~~59~~ 42, further comprising at least one capacitor for capturing the said pulsed electrical energy and wherein the said at least one feature is the voltage captured on the at least one capacitor from the pulsed electrical energy and said configuration is adapted by selecting the at least capacitor value based on said voltage.

Claim 62 (original): The device according to claim 42 which further couples to the inner wall motion using at least one push rod attached to the at least one inner wall.

Claim 63 (original): The device according to claim 42 which further couples to the inner wall motion using at least one cable attached to the at least one inner wall.

Claim 64 (original): The device according to claim 42 which further responds to the centrifugal force of the rotating tire.

Claim 65 (withdrawn): In a vehicle tire adapted to be mounted on a vehicle wheel, a device for monitoring at least one tire parameter and obtaining energy from the tire while the tire rotates upon a load-bearing surface, the device comprising:

at least one sensor to monitor the at least one tire parameter and producing a signal representative of the parameter;

a vehicle transmitter, coupled to said signal, for transmitting a representation of the signal to a remote vehicle receiver;

an energy converter disposed to respond to the load induced deflections of at least one tire inner wall and being adapted to convert said deflections into an energy output form; and

an energy transmitter coupled to said output energy to transmit said energy for use by said device.

Claim 66 (canceled):

Claim 67 (withdrawn): A method for obtaining electrical energy from a vehicle tire while said tire is rotating upon a load-bearing surface comprising the steps of:

coupling an energy converting device to the load-induced deflections of at least one tire inner wall;

providing pulsed electrical energy output in response to said deflections;

determining at least one feature of the electrical energy pulses;

capturing the electrical energy pulses on a capturing mechanism;

adapting the capturing mechanism to maximize the electrical energy capture based on at least one feature of the pulses; and

outputting the captured electrical energy.

Claim 68 (withdrawn): The method according to claim 67 wherein said at least one feature is the pulse width.

Claim 69 (withdrawn): The method according to claim 67 wherein the source resistance of the energy converting device is known and said at least one feature is the ratio of the pulse width to the resistance.

Claim 70 (withdrawn): The method according to claim 67 wherein the at least one feature is the energy captured.

Claim 71 (withdrawn): A method for adapting a pulsed energy capture device, having at least one capacitor, to maximize the captured energy comprising the steps of:

determining the pulse width of the energy pulses;

selecting the at least one capacitor based on said pulse width;

using the selected at least one capacitor to capture the energy pulses; and

outputting the captured energy.

Claim 72 (withdrawn): The method according to claim 71 wherein the pulsed energy source is electrical.

Claim 73 (withdrawn): A method for adapting a pulsed energy capture device, having at least one capacitor, to maximize the captured energy comprising the steps of:

determining the pulse width of the energy pulses;

determining the source resistance of the pulsed energy source;

selecting the at least one capacitor based on the ratio of the pulse width to said resistance;

using the selected at least one capacitor to capture the energy pulses; and

outputting the captured energy.

Claim 74 (withdrawn): The method according to claim 73 wherein the pulsed energy source is electrical.

Claim 75 (withdrawn): A method for adapting a pulsed energy capture device, having at least one capacitor, to maximize the captured energy comprising the steps of:

capturing the energy pulses on the at least one capacitor;

outputting the captured energy;

determining the energy captured on the at least one capacitor; and

selecting the at least one capacitor based on the energy.

Claim 76 (withdrawn): The method according to claim 75 wherein the pulsed energy source is electrical.

Claim 77 (withdrawn): A method for determining the time duration of the load bearing surface contact region from a vehicle tire while rotating upon the load-bearing surface, comprising the steps of:

coupling an energy converter to the load-induced deflections of at least one tire inner wall;

providing pulsed energy output in response to said deflections; and

determining the duration of the contact based on the time between rising and falling edges of the pulses.

Claim 78 (withdrawn): A method for determining the length of the load bearing surface contact region of a vehicle tire of known radius while rotating upon the load-bearing surface, comprising the steps of:

coupling an energy converter to the load-induced deflections of at least one tire inner wall surface;

providing pulsed energy output in response to said deflections;

determining the duration of the contact based on the time between the rising and falling edges of the pulses;

determining the period between contact regions;

calculating the length from the duration and period and the known tire radius.

Claim 79 (withdrawn): The method of claim 78 where the period is determined by measuring the time between contact regions based on the rising or falling edges of the pulses.

Claim 80 (withdrawn): A run flat tire having an inner core adapted with a cutout that accommodates a device mounted on an inner surface and protects said device as the tire is run flat.

Claim 81 (new): A device, adapted to be mounted on a vehicle tire, for obtaining energy from the load-induced tire deflections of at least one tire inner wall while rotating upon a load-bearing surface, the device comprising:

an energy converter coupled to said deflections and converting said deflections into pulsed electrical energy, and

capture electronics for capturing said pulsed electrical energy.

wherein said capture electronics maximizes the captured energy by adaptation to at least one characteristic of the pulsed electrical energy.

Claim 82 (new): The device according to claim 81, wherein said capture electronics comprises:

at least two capacitors where the said at least one characteristic is the pulse width of the pulsed electrical energy; and

the adaptation is to enable the combination of said at least two capacitors based on the pulse width.

Claim 83 (new): The device according to claim 81, wherein said capture electronics comprises:

at least two capacitors where the said at least one characteristic is the voltage captured on the at least two capacitors from the pulsed electrical energy; and

the adaptation is to enable the combination of said at least two capacitors based on the voltage.

Claim 84 (new): In a tire adapted to be mounted on a vehicle wheel, a device responsive to a condition of the tire, the device comprising:

responsive electronics mounted on a substrate;

a base plate securing said substrate to an inner surface of the tire and having opposed parallel inner and outer surfaces and a periphery, said outer surface engaging said inner surface of the tire; and

a patch overlying the inner surface of the base plate, said base plate being sandwiched between said patch and said inner surface of the tire, said patch further having a portion extending beyond said periphery of the base plate, said portion of said patch being bonded to said inner surface of the tire, wherein said patch includes an aperture through which the substrate projects.

Claim 85 (new): The device according to claim 84 where the responsivity of the device is the capture of pulsed electrical power, and the condition is the load-induced tire deflection of at least one tire inner wall while rotating upon a load-bearing surface.

Claim 86 (new): A method for obtaining electrical energy from a vehicle tire while said tire is rotating upon a load-bearing surface, the method comprising the steps of:

coupling and electrical energy converting device to the load-induced deflections of at least one tire inner wall;

determining at least one feature of the electrical energy pulses;

capturing the electrical energy pulses on a capturing mechanism;

adapting the capturing mechanism to maximize the electrical energy capture based on at least one feature of the pulses; and

outputting the captured electrical energy.

Claim 87 (new): The method according to claim 86, wherein said at least one feature comprises the pulse width.

Claim 88 (new): The method according to claim 87, wherein the source resistance of the energy converting device is known and said at least one feature comprises the ratio of the pulse width to the resistance.

Claim 89 (new): The method according to claim 86, wherein the at least one feature comprises the energy captured.